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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 09/945,204
Filing Date: August 31, 2001
Appellant(s): DOMINGUES, DAVID J.

James V. Lilly
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 11/24/08 appealing from the Office action mailed 5/28/08.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6,261,613	NARAYANASWAMY et al.	7-2001
3,767,421	GULSTAD et al.	10-1973
5,672,369	LONERGAN et al.	9-1997

6,053,400	REA	4-2000
6,365,210	SCHAIBLE et al.	4-2002
6,004,595	RAY et al.	12-1999

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1,3,8,10-13,15,16,20,22-23,25-26,36,43,59,60-65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Narayanaswamy et al (6261613) in view of Ray et al and Gulstad et al..

Narayanaswamy et al disclose a packaged refrigerated dough composition. The dough comprises basic active ingredient that is encapsulated in a shell of lipid material and acidic active ingredient. The lipid material has a melting point in the range 35-54.4

degree C (95-129.9 degree F). The dough is stored at refrigerated temperature in the range of 37.4-46degree F and is stable for a period of six weeks or more. The dough is packaged in a container that is substantially unpressurized. The leavening acid is selected from the acids cited on col. 8 lines 44-50. The reaction between the basic ingredient and the acid is prevented by the encapsulation. The liberation of carbon dioxide at the right time during the baking cycle is critical to the development of the structure and texture of the baked product. The leavening acid may also be encapsulated. The encapsulated sodium bicarbonate has an average particle size in the range of 100-250 microns. Narayanaswamy et al disclose on column 9 lines 5-10, the capsules have a core content in a range of 10-70% and the shell comprises about 30-90% by weight of the total encapsulated particle. The leavening capsules are used in concentration of 1-5%. The basic ingredient used is sodium bicarbonate. (see col. 4 lines 33-62, columns 5-6, col. 8 lines 39-67, col. 9 lines 19-24 and the examples)

Narayanaswamy et al do not disclose the package having at least two individual portions of the dough, the raw specific volume, baked specific volume, the acid leavening agent is selected to have low solubility, the specific amount of the basic acidic ingredient, the solid fat index of the barrier material as claimed, the container is a pouch or cup, the container is a cup and the type of barrier material as claimed.

Gulstad et al disclose doughs comprising encapsulated basic and acidic ingredients. They teach leavening during cooking can be accomplished by using leavening agents which are only nominally active at room temperature or by protecting the agents. Acidic ingredients which are only nominally active at room temperature are

sodium aluminum sulfate, dicalcium phosphate dihydrate and sodium aluminum phosphate. (see column 3 lines 54 through col. 4 line 41)

Ray et al disclose a refrigerated biscuit dough product. They teach the biscuit is packaged in individual dough piece in a container. (see col. 7 lines 10-15)

It would have been obvious to package the dough of Narayanaswamy et al in individual portions depending on the type of dough. For example, if it is a biscuit dough, it is notoriously well known to package biscuit as individual dough portion; this is exemplified in the teaching of Ray et al. It would also have been obvious to package into individual portion if one wants a plurality of pieces within the same container. This would have been readily apparent to one skilled in the art. While Narayanaswamy et al they do not specifically disclose selecting acidic ingredient to have solubility of greater than 35 kcal/mole, they do disclose acidic leavening agent having the solubility as claimed because they disclose the same leavening agent. Claim 8 recites the acidic active ingredient is sodium aluminum phosphate. Narayanaswamy et al disclose on column 8 lines 30-50, the acidic leavening agent can be sodium aluminum. Thus, selecting the acidic leavening agent to have the solubility as claimed is an embodiment within the Narayanaswamy et al disclosure. Furthermore, it would have been obvious to choose acidic ingredient among the materials disclosed to be nominally active at below baking temperature as taught by Gulstad et al to ensure the delaying of the chemical reaction between the leavening agents (solubility is equated to activity because insolubility of an active ingredient can prevent reaction of the active ingredient and leavening of a dough as defined on page 9 lines 4-5 of the specification). This furthers

the objective of Narayanaswamy et al because they disclose to prevent reaction between the basic material and leavening acid till baking. Thus, for any of the above reason, the selection of acidic active agent having the solubility claimed would have been obvious. Thus, it is obvious the leavening acid has the solubility as claimed. The leavening basic ingredient in Narayanaswamy et al is encapsulated and the barrier material has a melting point within the range claimed; thus, it is inherent the dough will possess similar degree of expansion, stability and carbon dioxide release as claimed and the activity of the encapsulated basic ingredient is within the range claimed. Page 22 of the specification discloses " the relative amount by weight of active ingredient to total encapsulated particle weight is referred to as activity; thus an activity 55-70% means the active ingredient is in the range of 55-70%. Narayanaswamy et al disclose on column 9 lines 5-10, the active ingredient is in the range of 10-70% which fall within the range claimed. The amount of basic leavening agent used can vary with the type of product made. Narayanaswamy et al disclose the leavening capsules are used in amount of 1-5%; thus, it would have been obvious to select any amount falling within this range depending on the type of product and the properties such as texture, expansion, volume etc.. wanted. Narayanaswamy et al show in the examples that the amount of leavening agent used can vary depending on the type of dough. This parameter can readily be determined by one skilled in the through routine experimentation. As to the raw and baked specific volumes, these vary with the type of dough and can readily be determined by one skilled in the art to obtain the most optimum product. It would have been obvious to one skilled in the art to determine this

value depending on the degree of encapsulation, the amount of leavening used and the type of dough. The same factors will also be considered in the baked specific volume. Narayanaswamy et al disclose triglycerides such as found in hydrogenated vegetable oil is used as the barrier material. Thus, it would have been obvious to one skilled in the art to use any known triglyceride materials and all the oils claimed are well known triglycerides. When the known oil is selected, it is obvious the solid fat index will be the same as claimed. In any event, it would have been obvious to select a solid fat index that would give the most optimum barrier property; this is a result-effect variable which can be determined readily by one skilled in the art. Narayanaswamy et al disclose the dough is package in a container which is essentially a cup because claim 60 does not define the structure of the cup and a cup is defined by Webster's II dictionary as an open container with a flat bottom. Narayanaswamy et al disclose on col. 12 lines 11-13, the batter may be packaged in flexible packaging such as plastic pouches. Thus, pouches are known packaging material. It would have been obvious to package the dough in a pouch when one desires to package the product in flexible packaging.

Claim 66 is rejected under 35 U.S.C. 103(a) as being unpatentable over Narayanaswamy et al in view of Ray et al and Gulstad et al as applied to claims 1,3,8,10-13,15,16,20,22-23,25-26,36,43,59,60-65,67 above, and further in view of Schaible et al.

The prior art does not teach packaging having an outer non-pressurized package.

Schaible et al disclose a method of preparing food product. They teach to wrap the product in a plastic overwrap and then placing the wrapped product in a corrugated box.

The concept of packaging having multilayer is known in the art as shown by Schaible. It would have been obvious to pack the container of Narayanaswamy et al in another container to have added protection of multilayer packaging material.

Claims 67-70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Narayanaswamy et al in view of Ray et al and Gulstad et al as applied to claims 1,3,8,10-13, 15,16,20,22-23,25-26,36,43,59,60-65 above, and further in view of Rea and Lonergan et al.

None of the reference teaches packaging in container having a head space which has at least partial vacuum and purging with gas.

Lonergan et al disclose gas packaging of dough having improved storage stability. (see col. 8 line 48 through col. 9 line 14)

Rea discloses a container for packaging dough product which accommodate expansion of the dough and has a vacuum pulled. Rea also discuss in the background section that vacuum packaging is well-known. (see column 1)

Vacuum packaging and container having head space to accommodate expansion of the dough during storage is well known in the art and is exemplified in the Rea disclosure. It would have been obvious to one skilled in the art to use packaging having headspace to accommodate the expansion of the dough during storage as taught in Rea. It would also have been obvious to use vacuum packaging to enhance

the stability of the dough during storage due to the elimination of oxygen which causes oxidation. This concept is notoriously well-known in the art. The concept of modified gas packaging to improve storage stability is well known in the art as exemplified in the Lonergan et al disclosure. It would have been obvious to one skilled in the art to purge the package with gas for enhanced storage stability. The use of nitrogen is well known.

(10) Response to Argument

On page 12 of the appeal brief, appellant argues that it is undisputed that Narayanaswamy et al do not disclose that the non-encapsulated acidic active ingredient must have a low solubility. The basis of this argument is not understood. Narayanaswamy et al disclose the leavening acid can be sodium aluminum phosphate. This is the same acidic agent as recited in claim 8; thus, it is inherent that the leavening agent has the solubility claimed whether or not it is disclosed. The acidic active ingredients such as anhydrous monocalcium phosphate, sodium acid pyrophosphate and sodium aluminum sulfate cited in claim 25 are also disclosed in Narayanaswamy et al. Thus, selecting the acidic leavening agent to have the solubility as claimed is an embodiment within the Narayanaswamy et al disclosure. Furthermore, it is known that different acidic ingredients have different activity and thus solubility as shown in the Gulstad reference. Gulstad teaches that sodium aluminum sulfate, dicalcium phosphate and sodium aluminum phosphate are only nominally active at room temperature (col. 3 lines 66-66). Thus, it would also have been obvious to choose acidic ingredient among the materials disclosed by Narayanaswamy et al to be nominally active at below baking temperature as taught by Gulstad et al to ensure the delaying of the chemical reaction

between the leavening agents (solubility is equated to activity because insolubility of an active ingredient can prevent reaction of the active ingredient and leavening of a dough as defined on page 9 lines 4-5 of the specification). This furthers the objective of Narayanaswamy et al because they disclose to prevent reaction between the basic material and leavening acid till baking. Thus, for any of the above reason, the selection of acidic active agent having the solubility claimed would have been obvious and explicitly disclosed in Narayanaswamy et al. Appellant argues Narayanaswamy et al fail to provide any reason or motive to make any changes to his composition. The reference does not need to provide a motive to change the composition when the composition can include the component. One skilled in the art would readily select sodium aluminum phosphate, even without knowing anything about the solubility, as the acidic ingredient because it is disclosed in the reference as an agent to use. In view of what is known in the art about different acidic ingredients as taught by Gulstad et al, the selection would have been further obvious.

With respect to Gulstad et al reference, appellant argues that the majority of the acidic active ingredients disclosed does not satisfy the solubility requirements. This argument is not persuasive because Gulstad et al do disclose some components that meet the solubility requirement. Some of the claimed acidic ingredients do not meet the solubility requirement of claim 1. For example, sodium acid pyrophosphate and monocalcium phosphate recited in claim 25 do not meet the solubility requirement as shown by appellant on page 13 of the appeal brief. The Gulstad reference is used to show that not all leavening acids are the same and some are known as slower acting

leavening than other. It would have been obvious to select the slower acting leavening such as sodium aluminum phosphate out of the group disclosed by Narayanaswamy et al when desiring a slower acting agent. Narayanaswamy et al disclose such agent on col. 8 lines 40-50. The fact is that both Narayanaswamy and Gulstad disclose the acids as claimed. Thus, the selection of such acidic ingredient is explicitly disclosed and suggested by the references. On page 13 of the appeal brief, appellant comments that Ray et al are silent with regard to the nature and specifics of leavening agents. The Ray et al reference is not relied upon for the teaching of leavening agents.

On page 16, appellant states that Schaible is silent with respect to specific leavening agents. Schaible is not relied upon for the teaching of the leavening agents. The same is true for the Rea et al and Lonergan et al references.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Lien T Tran/

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